

- **Scissors lifts for automobile bodies**

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1. INTRODUCTION



WARNING

This Manual is intended for factory personnel who are going to operate the lift; read the Manual before you use the platform in any way or perform any actions on it. This Manual contains important information about the following points :

- THE PERSONAL SAFETY OF THE OPERATORS
- THE SAFETY OF THE LIFT
- THE SAFETY OF THE VEHICLES LIFTED

2. INSTRUCTIONS FOR USE

The Manual forms part of the lift and must be available for reference in the immediate vicinity of the lift at all times. The operator of the lift must be able to refer to the Manual quickly and at any given moment.

IT IS STRONGLY RECOMMENDED THAT YOU SHOULD FIRST CAREFULLY READ THE SAFETY INSTRUCTIONS.

The manufacturer hereby refuses to accept any responsibility for injury to persons or damage to equipment or property if it appears that incorrect handling of the lift has taken place. This instructions manual only describes the operating- and safety aspects which persons who are installing the machine need to know. In order to understand the terminology used in this manual, it is necessary that the person performing the installation work should have specific experience in industrial work, service, maintenance and repair activities, and must also possess the ability to explain the drawings and the descriptions contained in

this manual to other people. At the same time he must also be aware of the general and specific safety regulations which apply in the country where the lift is being installed. The word "operator", which has been used throughout this manual, refers to a person who is authorised to use the platform. The minimum legal age for using the lift is 18 years.

3. DESCRIPTION OF THE LIFT (Fig. 1)

This is an electro-hydraulic lift, model ASB-2503, and it has been developed and manufactured to lift passenger cars and delivery vans and to hold these in a specified lifted position. The chief advantages of the lift are :

- Welded floor frame
- Movable parts (supports and arms)
- Lifting components
- Control cabinet
- Safety arrangements.

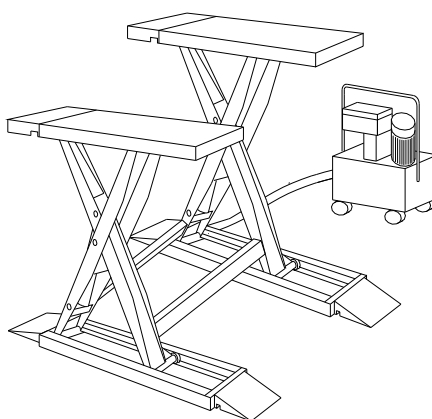


Fig. 1

See Fig. 2 for the following terms :

1. **Operating side** : the area in which the operator does his work, and from where he can access the control cabinet.
2. **Rear** : The side where the support extension pieces are mounted.
3. **Front** : The side where no support extension pieces have been mounted.
4. **Sliding direction** : Direction in which the vehicle will come sliding in, with

the motor-side of the vehicle in the front.

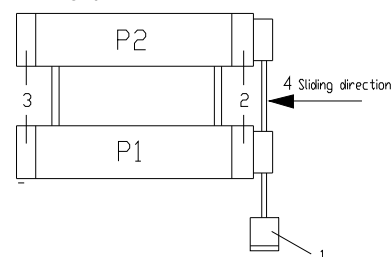


Fig. 2

CONTROL CABINET (Fig. 3)

The electrical control cabinet consists of the following :

1. A frame
2. An oil tank
3. Wheels
4. Electrical motor
5. Valve block
6. Operating and control part
7. Safety switch for downward motion
8. Voltage monitoring lamp
9. Horn
10. Combined function button

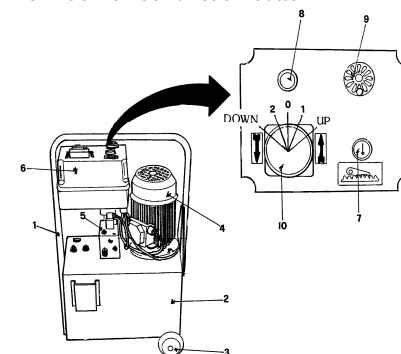


Fig. 3

SAFETY ARRANGEMENTS

These include :

- Torsion beams which ensure synchronisation and, if one of the cylinders fails, the torsion bar transfers the power to the cylinder which is working properly.
- Overpressure valves protect the system against damage arising due to excessively high oil pressure.
- Fusible electrical cut-outs, and a motor-protection switch
- Mechanical gears to prevent the lift from sinking back to its original position in case of oil leakages.

4. TECHNICAL SPECIFICATIONS ASB-2503

LIFTING CAPACITY	2,500 kg
Lifting time	15 sec
Lowering time :	15 sec
Total weight	500 kg
Noise level	70-dB(A)/1m
Working temperature	-10°C / +40°C
Working environment	covered
Dimensions	Fig. 4

ELECTRICAL MOTOR ASB-2503	
Motor power	3.0 KW
Voltage	230V/400V(3-Ph). +/- 5%
Frequency	50 Hz
Amperage	230V: 13.5 A 400V: 7.8 A
No. of wires	4
Speed :	1400 rpm

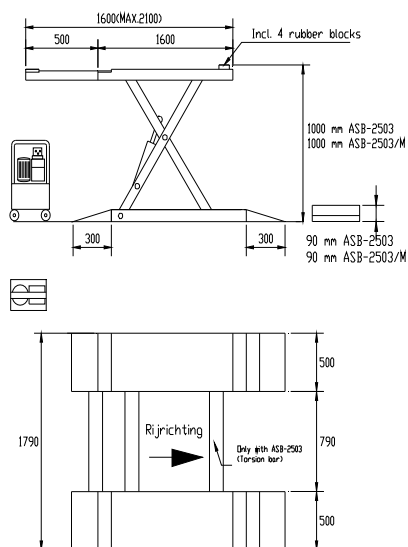


Fig. 4

THE WEIGHT OF THE VEHICLE

The lift can be used for practically all vehicles provided that the maximum loading capacity is not exceeded.

MAXIMUM DIMENSIONS OF THE VEHICLE TO BE LIFTED (see fig. 5)

Maximum breadth : 2200 mm

Maximum wheel base : 3000 mm

Keep in mind that low-slung cars (cars with chassis close to the ground) do not match with the lift structure. Take particular care in case of low-slung sports cars.

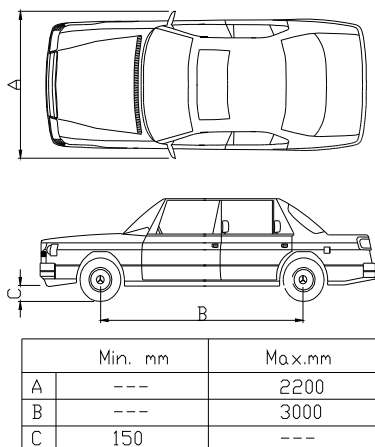


Fig. 5

Always keep in mind the lifting capacity of the lift in the case of vehicles with special characteristics (such as delivery vans and other types of vans, etc.).

The safety zone (Fig. 6) is to some extent determined by the dimensions of the vehicle to be lifted.

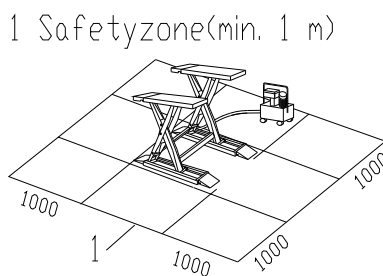


Fig. 6

CHECK THE MAXIMUM LOADING CAPACITY, THE MAXIMUM WEIGHT AND THE DISTRIBUTION OF LOAD IN THE CASE OF LARGE VEHICLES.



MAX. 2500 kg ASB-2503

5. SAFETY

It is important to read point number 5 of this Manual properly since it contains important information about the risks which the operator of the lift will be exposed to if the lift is not used properly. In what follows, you will find information about how to avoid dangerous situations.

WARNING.



The lift is designed and constructed to lift vehicles and to hold them in a certain position in a covered working place. Any other form of use is not permitted. In short, the lift is not suitable for the following purposes :

- Washing and spraying work.
- To be used as a device for applying force.
- To be used as a goods lift.
- To be used as a jack or for lifting vehicles for changing wheels.

The manufacturer hereby refuses to entertain any claims for damages arising in connection with injury to persons or damage to vehicle or other property caused due to incorrect and/or unauthorised use of the lift.

During lifting- and lowering movements, the operator must be within the zone of operation (1), as shown in Fig. 6. The presence of any person in the safety zone (2) is strictly forbidden. The presence of persons under the vehicle is only permitted if the vehicle is parked in the lifted position.

USE THE LIFT ONLY IF ALL THE SAFETY ARRANGEMENTS ARE WORKING PROPERLY. IF THESE RULES ARE NOT FOLLOWED, SERIOUS INJURY COULD BE CAUSED TO PERSONS AS WELL AS IRREPARABLE DAMAGE TO THE LIFT AND THE VEHICLE ON THE LIFT.

GENERAL PRECAUTIONS

- The operator is bound to follow the regulations which apply in the country in which these lifts are installed.

In addition, the operator must :

- Always work in the operator area as designated in the Manual.
- Never remove the protective guards or dismantle or shut down the mechanical, electrical or other types of safety arrangements.
- Read the safety regulations relating to the lift and take cognisance of the safety information provided in this Manual.

The following terms have been used in this Manual to describe the various types of risk :

DANGER : there is a direct possibility of danger which could lead to serious injury or death.

WARNING: this indicates situations and/or actions which are unsafe and could lead to injuries of various types except death.

CAUTION : this indicates situations and/or actions, which are unsafe and could lead to light injuries to persons and/or damage to the lift, the vehicle or other properties.

RISK OF DAMAGE DUE TO ELECTRICITY : Special safety arrangements have been made on the lift in places where the risks are very high.

RISKS AND PROTECTIVE MEDIA

The risks to which the operator is exposed when the vehicle is in a raised position, together with the protective media which have been installed in order to limit the possible dangers.

LONGITUDINAL AND LATERAL MOVEMENTS OF THE VEHICLE.

Longitudinal and lateral movements include the following : forward- and backward movements of the load (the vehicle). Lateral movements include displacement of the vehicle to the left or the right, particularly during the lifting process. These movements can be prevented by placing the vehicle securely on the support arm rubbers (on the car-jack support points).



WARNING

Do not move the vehicle when it is on the platform. The platforms and the rubber fittings should only be removed at the lowest lifting position, and when there is no load.

It is extremely important that the vehicle is placed on the lift in such a manner that there is an uniform distribution of weight over the platforms (Fig. 7). Please note that the motor side of the vehicle must be placed on the side which cannot be pushed out.

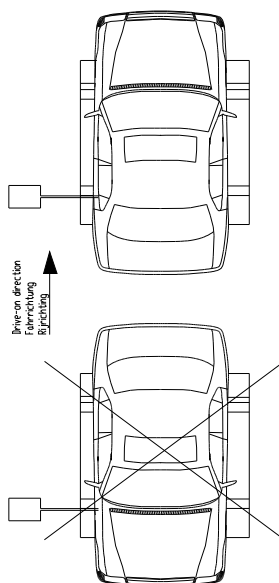


Fig. 7

To ensure the safety of persons and of materials, you must see to it that :

- The safety zone is kept under observation during the lifting process.
- The motor of the vehicle is switched off, that it is in gear, and that the handbrake is also fully applied.
- The vehicle must be lifted on the car-jack support points .
- Due account has been taken of all the dimensions and weights.

RISKS INVOLVED IN LIFTING A VEHICLE

The following safety arrangements have been installed in order to prevent overloading and damage :

- Limit switches, for limiting the downward movement.
- Overpressure valves offer protection against damage due to excessive lifting.
- Thermal protection switches off the power in the case of overloading.

RISKS TO PERSONS

This paragraph describes the risks to which the operator or any other person near the working area where the lift is in operation, in case the lift is not used in the appropriate manner.

RISKS INVOLVED IN MOVING A VEHICLE

Movements may be caused during activities which involve the application of an adequate amount of force for moving the vehicle (Fig. 8). In cases where the vehicle being lifted is almost of the maximum permissible weight or the maximum permissible dimensions, movements in the vehicle could lead to overloading or unbalancing.

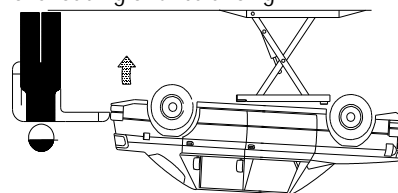


Fig. 8

RISKS INVOLVED IN POSITIONING A VEHICLE

This type of risk may arise if the vehicle is not properly placed on the rubber supports (Fig. 9), or if the platforms are not properly aligned with respect to the vehicle. One can avoid this by always lifting the vehicle using the car-jack support points , and to place the vehicle as far as possible in the centre of the platform.

Attention : while dismantling heavy parts (for example the motor or shafts) please note that the weight distribution ratios change !

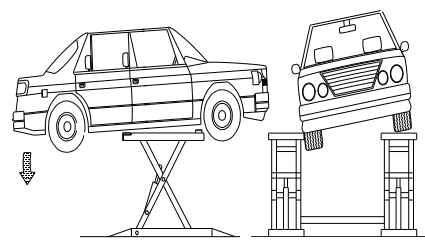


Fig. 9

Never rest any fittings or other objects against the platform and never place such objects under the platform when it has a load mounted on it, since this can impede the lowering operations and may cause the vehicle to fall off the platform (Fig. 10).

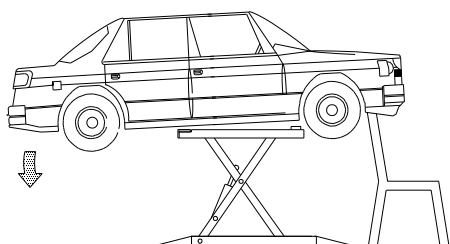


Fig. 10

Never enter the vehicle or start the motor when the vehicle is on the lift (Fig. 11).

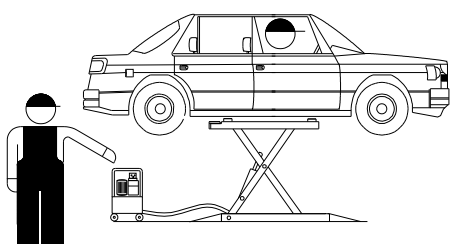


Fig. 11

RISK OF ELECTROCUTION

Never spray water or steam or solvents or paint in the area immediately surrounding the platform and the control cabinet (Fig. 12).

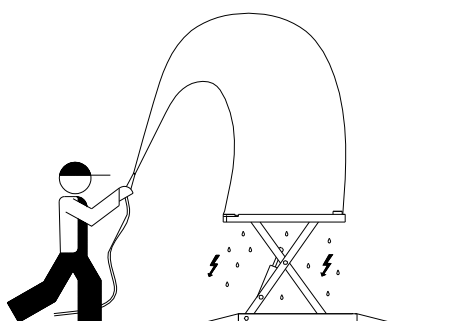


Fig. 12

RISK OF SLIDING OUT

This risk can be overcome by avoiding the spillage of oil or grease in the area surrounding the lift (Fig. 13). Apart from that, any oil spillage which may occur should be thoroughly removed from the spot.

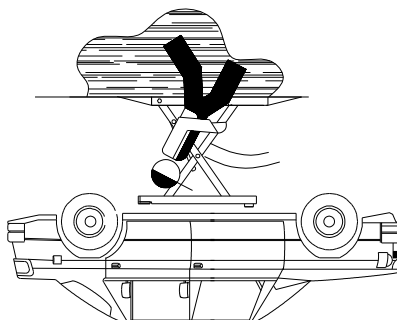


Fig. 13

6. CONTROLS AND OPERATION (Fig. 14)

The operating part of the electrical control cabinet contains the following :

A COMBINED FUNCTION KEY

with the following functions :

0 position : the electrical circuit of the lift is not live. If necessary, a lock may be put in place to prevent the misuse of the platform.

M position (1 and 2) : In these positions, the electrical circuit is live, and the protective arrangements can be operated.

UP position : In this position, the lifting valve and the motor are used, and the lift can be raised.

DOWN position : In this position, the motor and the valve for the lowering motion are used, and the lift can be lowered to the safety height.

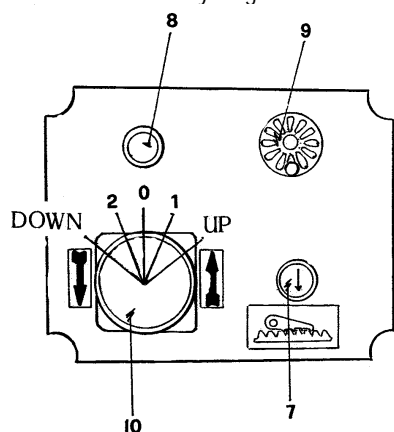


Fig. 14

SAFETY BUTTON FOR DOWNWARD MOVEMENT (7)

On pressing this button, the horn, and after a few seconds, the valves will become live. The lift will now complete the last 400 mm of the downward movement.

SEQUENCE OF OPERATIONS

Positioning of the vehicle

Park the vehicle in the middle of the platform and if necessary push out the extension pieces of the platform.

Support points

Place the rubber supports under the car-jack support points of the vehicle.

Lifting

Put the function button (10) in the lifting position (1) until the desired height is reached.

Parking

Now press the button 7 in order to activate the mechanical lock.

Lowering

Turn the function button to the DOWN position and hold the button in this position. The lift will rise a few centimetres, the mechanical lock will disengage and the lift will fall back to the safety height. Press the safety switch for the lowering operation (7) for completing the last 400 mm of the downward motion.

Lowering in case of emergencies (Fig. 15)

In case of a power failure, it is possible to lower the platform in the following manner :

Manually unlock the mechanical lock, and turn the lowering motion valve (1) which is located on the valve block, in the anticlockwise direction, into the 'open' position. Close the valve after the platform has been lowered fully.

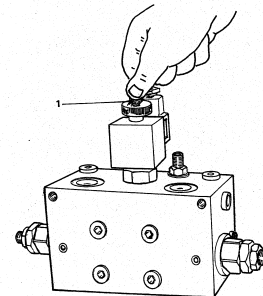


Fig. 15

7. MAINTENANCE

The lift must be inspected once a year according to the CE Regulations, by a person who is certified to do the same. In addition, preventive maintenance must also be carried out once a year on the lift (ask for AUTEC maintenance contracts).

We recommend the following lubricants for lubricating the lift (see Fig. 16):

No.	Texaco	Shell	ESSO	Castrol
1. Guides	Teflon spray	Teflon spray	Teflon spray	Teflon spray
2. Guide support plates	Molytex EP 2	Alvania HDX vet 2	Multipurpose grease + moly	MS3 grease
3. Hydraulic system	Rando 32	Tellus 32	Nutto H32	HYSPIN HWS 32

No.	Lubricating points	Lubricating interval
1.	Guides for the sliding block (only lubricate the guides on the upper side of the guide blocks. Do not lubricate the underside, because this accumulates dirt).	3 months
2.	Guides for the support plate extension pieces	3 months
3.	Replacement of hydraulic oil	5 years

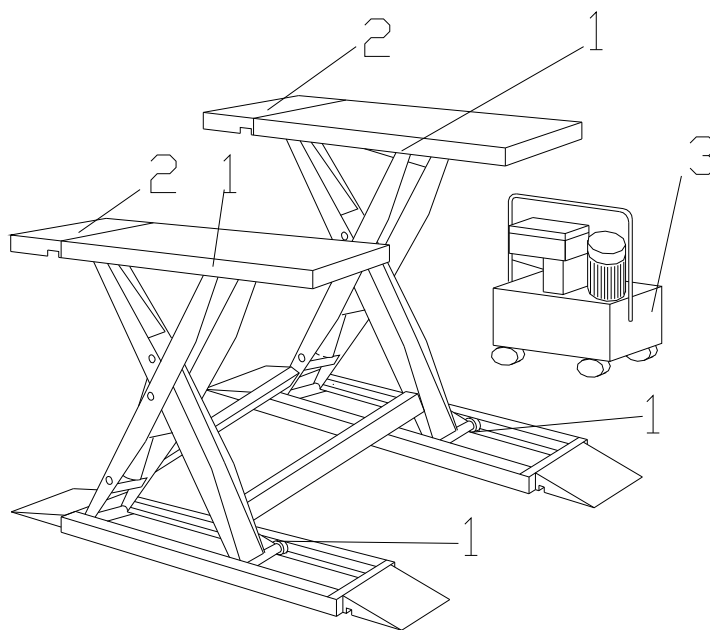


Fig. 16

CHECKLIST		
Every three months	Hydraulic circuit	Check the oil level in the oil tank Check for leakages if any
	Foundation bolts	Check the tightening torque of the foundation bolts.
	Hydraulic pump	Check whether there are any strange sounds during the running of the pump. Check whether the tightening bolts are tightened properly.

8. TROUBLE-SHOOTING TABLE

Search for the source of the fault, and carry out the necessary repairs only after all the necessary SAFETY REGULATIONS as described have been taken into account.

i ALL "RESETTING" ACTIONS, REPAIRS TO THE SAFETY ARRANGEMENTS AND ELECTRICAL COMPONENTS IN THE LIFT MUST BE CARRIED OUT BY AUTHORISED PERSONNEL ONLY.

PROBLEMS	POSSIBLE CAUSES	REMEDIAL ACTION
<ul style="list-style-type: none"> The lift does not move upward when the lifting button is pressed 	<ul style="list-style-type: none"> The main switch is off The fuse has burnt out The lift is overloaded The switch is not working Fault in the electrical system The direction of rotation of the motor is wrong Insufficient hydraulic oil Suction pump is choked up 	<ul style="list-style-type: none"> Switch on the main switch Replace the fuse Maintain the weight according to the specifications Replace the switch, and call Autec Call up the Autec service department Switch the phase wires Fill in hydraulic oil Clean the suction pump
<ul style="list-style-type: none"> The lift rises only partially 	<ul style="list-style-type: none"> The thermal protection keeps tripping The lifting bridge is overloaded Voltage too low Insufficient hydraulic oil Suction pump is choked up 	<ul style="list-style-type: none"> Re-set the thermal protection Maintain the weight according to the specifications Check the voltage Fill in hydraulic oil Clean the suction pump
<ul style="list-style-type: none"> The lift does not come down when the button for the downward motion is pressed 	<ul style="list-style-type: none"> Foreign object under the lifting table Fault in the electrical system The downward motion button is soiled The downward motion valve is not working properly 	<ul style="list-style-type: none"> Remove the foreign object under the lifting table Call up the Autec service department Replace the downward motion button Call up the Autec service department
<ul style="list-style-type: none"> The lift goes down in jerks The lifts sink back to the original position The platforms do not align properly 	<ul style="list-style-type: none"> There is air entrapped in the hydraulic system There is a leakage in at least two hydraulic system pipelines The hydraulic cylinders are dirty The non-return valve is leaking Several possible causes 	<ul style="list-style-type: none"> Air the system Call up the Autec service department Call up the Autec service department Call up the Autec service department Call up the Autec service department

DETAILS REQUIRED WHILE CALLING AUTEC SERVICE.

If you are reporting a fault, try to provide at least the following data :

- The serial number, the type and the year of manufacture of the lift.

ORDERING SPARE PARTS

For ordering spare parts, please refer to the following Technical Instructions Book-pages which will be supplied on request :
uni/TE-ASB 3005

9. CONFORMITY DECLARATION

AUTEC Hefbruggen b.v.

Vlasakker 11

NL 3417 XT MONTFOORT

The Netherlands

hereby declares that the lift of the type :

ASB-2503

has been designed and constructed in accordance with the provisions contained in **European Regulations, namely :**

EN291/1992 – EN292/1992

And CE-regulations

89/392 EEC, 93/44 EEC, 93/68 EEC 91/368 89/336 73/23 CEE

AUTEC Hefbruggen bv

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